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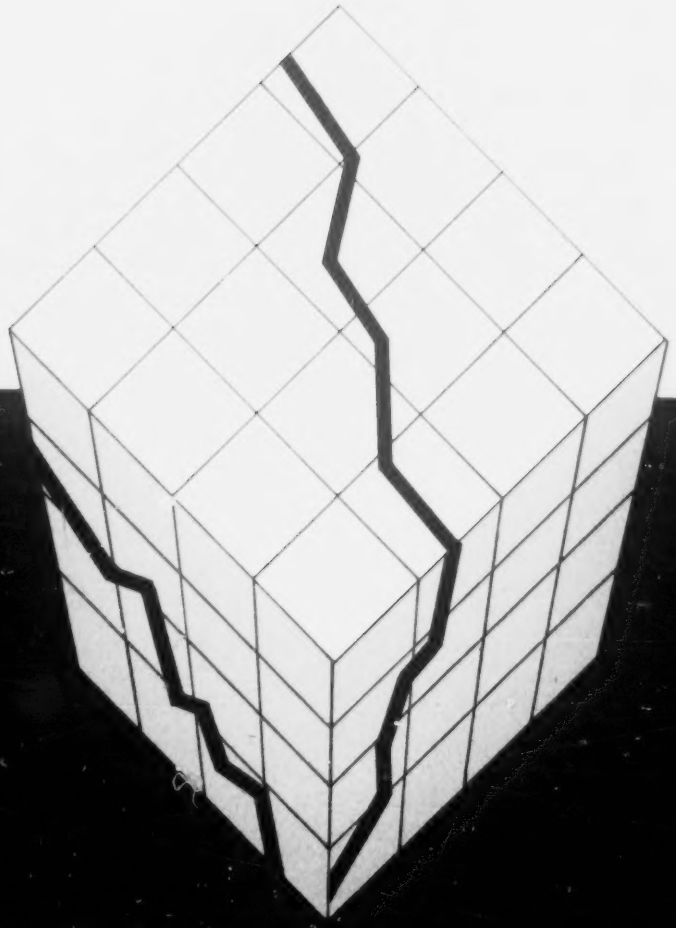

Sales of Natural Gas Liquids and Liquefied Refinery Gases

American Petroleum Institute

NPGA National PROPANE GAS Association

GPA Gas Processors Association

1988 Sales of Natural Gas Liquids and Liquefied Refinery Gases

Finance, Accounting and
Statistics Department
September 1989

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Preface

The 1988 Sales of Natural Gas Liquids and Liquefied Refinery Gases marks the publication of the fifth survey jointly sponsored by the American Petroleum Institute (API), the Gas Processors Association (GPA), and the National PROPANE GAS Association (NPGA).

Sales of natural gas liquids and liquefied refinery gases totalled 35.2 billion gallons in 1988. This volume reflected an increase of 1.2 billion gallons or 3.7 percent from 1987. By product, ethane, propane, butane and pentanes plus registered increases of 7.3, 0.2, 6.1 and 4.5 percents respectively.

According to the survey, gas utility usage increased 40.7 percent and other uses increased by 9.5 percent. Residential & commercial usage increased 8.0 percent, chemical use was up 7.6 percent, and industrial increased only 0.6 percent. All other sectors showed declines, with motor gasoline blending down 4.0 percent, farm use down 1.9 percent, and internal-combustion fuel down 0.5 percent.

The following table illustrates the percentage distribution of total sales by sector for both 1988 and 1987.

Sector	1988 %	1987 %
Residental & Commercial	17.5	16.8
Internal-Combustion Fuel	2.0	2.1
Chemical	40.6	39.1
Industrial	5.7	5.8
Gas Utility	0.9	0.7
Farm	4.1	4.3
Other	2.8	2.7
Gasoline Blending	26.4	28.5
Total	100.0	100.0

The ten states which had the largest volumes of sales are ranked below. Their sales came to 28.3 billion gallons or 80.3 percent of the total national volume.

Rank	State	Volume (M/gals)	% of Total
1.	Texas	15,094,141	42.9
2.	Louisiana	4,272,948	12.1
3.	Illinois	2,397,539	6.8
4.	Kansas	1,984,435	5.6
5.	California	1,443,745	4.1
6.	Michigan	1,011,151	2.9
7.	Ohio	659,111	1.9
8.	Indiana	538,738	1.5
9.	Kentucky	445,947	1.3
10.	Iowa	426,111	1.2
	Total	28,273,866	80.3

Washington, D.C.
September 1989

TABLE 1. Sales of Natural Gas Liquids and Liquefied Refinery Gases in the United States, 1988 and 1987 (Thousands of Gallons)

Category	1988	1987	VOLUME CHANGE	% CHANGE
Product Type:				
Ethane 1/	8,030,862	7,481,292	549,570	7.3
Propane 2/	14,315,784	14,293,860	21,924	0.2
Butane 3/	8,050,140	7,589,652	460,488	6.1
Pentanes Plus 4/	4,808,034	4,599,422	208,612	4.5
United States Total	35,204,820	33,964,226	1,240,594	3.7
Principal Uses:				
Residential & Commercial	6,148,583	5,692,639	455,944	8.0
Internal-Combustion Fuel	714,778	718,013	-3,235	-0.5
Chemical/Industrial:				
Chemical 5/6/	14,295,406	13,286,752	1,008,654	7.6
Industrial 7/	1,996,549	1,984,073	12,476	0.6
Gas Utility	335,946	238,819	97,127	40.7
Farm	1,431,176	1,458,802	-27,626	-1.9
Other 8/	997,882	911,545	86,337	9.5
Gasoline Blending	9,284,500	9,673,583	-389,083	-4.0
United States Total	35,204,820	33,964,226	1,240,594	3.7

1/ Includes ethylene.
2/ Includes propylene.
3/ Includes isobutane and butylene.
4/ Includes isopentane, natural gasoline and plant condensate. Excludes field condensate.
5/ Includes use in synthetic rubber manufacture.
6/ The reported data strongly suggest that this category includes not only ethane, propane, butane and pentanes plus consumed as chemical feedstocks, but some refinery olefins and chemical plant fuel usage.
7/ Includes refinery fuel use.
8/ Includes use as synthetic natural gas feedstock and use in secondary recovery projects.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Table 2. Sales of Natural Gas Liquids and Liquefied Refinery Gases by Product Type, PAD District and State, 1988 and 1987 (Thousands of Gallons)

District & State	Ethane		Propane		Butane	
	1988	1987	1988	1987	1988	1987
PAD Dist. I						
New England						
Connecticut	-	-	64,007	60,501	W	W
Maine	-	-	68,253	51,248	-	-
Massachusetts	-	-	100,425	102,959	W	W
New Hampshire	-	-	90,831	82,561	-	-
Rhode Island	-	-	23,191	24,465	W	W
Vermont	-	-	50,353	44,281	-	-
Central Atlantic						
Delaware	-	-	39,764	36,717	W	W
Maryland/D.C.	-	-	72,872	69,378	W	W
New Jersey	-	-	219,807	171,251	69,414	174,962
New York	-	-	226,584	221,505	W	W
Pennsylvania	-	W	242,454	205,110	120,442	W
Lower Atlantic						
Florida	W	W	344,908	351,098	W	W
Georgia	-	-	290,461	257,922	W	W
North Carolina	-	-	340,757	356,636	W	W
South Carolina	-	-	152,569	144,832	W	W
Virginia	-	-	184,333	165,587	764	W
West Virginia	-	-	44,375	38,622	-	-
Total	347	99,241	2,555,944	2,384,673	206,930	340,617
PAD Dist. II						
Illinois	1,267,364	959,620	587,673	688,646	508,107	479,560
Indiana	-	-	403,502	390,302	81,163	31,210
Iowa	-	-	423,040	373,554	W	W
Kansas	283,749	287,815	323,433	209,937	631,114	582,250
Kentucky	W	W	314,803	317,630	85,443	112,950
Michigan	W	-	772,611	735,740	157,563	153,185
Minnesota	-	-	342,259	314,961	W	W
Missouri	-	-	409,478	361,960	1,292	1,213
Nebraska	-	-	225,479	199,568	W	1,068
North Dakota	-	-	92,014	88,566	28,821	35,309
Ohio	-	W	575,162	533,951	82,621	W
Oklahoma	2,115	1,393	194,734	186,166	172,224	185,770
South Dakota	-	-	101,005	139,392	-	W
Tennessee	-	-	186,294	144,979	W	W
Wisconsin	-	-	373,918	321,256	W	W
Total	1,646,698	1,459,747	5,325,405	5,006,608	1,769,754	1,644,765
PAD Dist. III						
Alabama	W	-	203,424	199,686	7,868	8,015
Arkansas	-	-	163,173	151,370	2,443	2,666
Louisiana	977,100	1,063,420	543,635	463,629	1,766,051	1,755,485
Mississippi	-	-	168,304	151,952	62,486	31,917
New Mexico	W	W	67,244	67,348	17,704	2,678
Texas	5,365,424	4,825,781	4,028,372	4,623,307	3,297,522	2,736,215
Total	6,342,970	5,889,216	5,174,152	5,657,292	5,154,074	4,536,976
PAD Dist. IV						
Colorado	-	-	103,895	90,532	12,442	15,008
Idaho	-	-	30,680	25,367	W	W
Montana	-	-	52,898	50,956	69,274	91,762
Utah	-	-	43,366	41,868	67,310	90,781
Wyoming	W	W	69,974	88,273	43,585	58,277
Total	522	446	300,813	296,996	192,620	256,080
PAD Dist. V						
Alaska	-	-	11,930	11,799	W	-
Arizona	-	-	71,827	78,761	13,641	22,832
California	W	W	662,903	657,351	565,232	592,641
Hawaii	-	-	W	W	-	-
Nevada	-	-	46,949	39,855	W	-
Oregon	-	-	66,367	63,848	W	W
Washington	-	-	91,495	89,250	146,511	195,384
Total	40,325	32,642	959,470	948,291	726,762	811,214
U.S. Total	8,030,862	7,481,292	14,315,784	14,293,860	8,050,140	7,589,652

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Pentanes Plus 1988	Pentanes Plus 1987	Total 1988	Total 1987	District & State
				PAD Dist. I
				New England
W	-	67,279	61,194	...Connecticut
-	-	68,253	51,248	.....Maine
W	W	101,017	103,782	.Massachusetts
-	-	90,831	82,561	.New Hampshire
-	-	23,842	26,112	..Rhode Island
-	-	50,353	44,281	.....Vermont
				Central Atlantic
-	-	50,564	53,117	.....Delaware
-	-	72,979	69,569	.Maryland/D.C.
W	W	290,798	348,394	....New Jersey
W	W	227,064	221,601	.....New York
W	W	364,568	487,119	..Pennsylvania
				Lower Atlantic
W	W	360,978	380,006	.....Florida
W	W	292,872	259,812	.....Georgia
W	W	341,994	358,852	North Carolina
W	W	152,863	145,216	South Carolina
-	W	185,097	165,910	.....Virginia
W	W	44,516	38,761	.west Virginia
22,647	73,004	2,785,868	2,897,535	.....Total
				PAD Dist. II
34,395	62,771	2,397,539	2,190,597	.....Illinois
54,073	100,401	538,738	521,913	.....Indiana
W	W	426,111	376,321	.....Iowa
746,139	727,963	1,984,435	1,807,965	.....Kansas
10,216	17,818	445,947	453,719	.....Kentucky
W	27,472	1,011,151	916,397	.....Michigan
W	W	360,134	329,506	.....Minnesota
W	W	411,175	363,640	.....Missouri
W	403	225,990	201,039	.....Nebraska
6,371	25,616	127,206	149,491	..North Dakota
W	W	659,111	784,637	.....Ohio
44,040	52,633	413,113	425,962	.....Oklahoma
-	-	101,005	139,760	..South Dakota
W	W	187,883	146,545	.....Tennessee
W	W	374,400	321,385	.....Wisconsin
922,081	1,017,757	9,663,938	9,128,877	.....Total
				PAD Dist. III
1,571	W	213,210	208,719	.....Alabama
W	W	166,116	154,559	.....Arkansas
986,162	758,965	4,272,948	4,041,499	.....Louisiana
194,357	W	425,147	184,195	...Mississippi
41,070	59,271	126,117	129,312	....New Mexico
2,402,823	2,462,598	15,094,141	14,647,901	.....Texas
3,626,483	3,282,701	20,297,679	19,366,185	.....Total
				PAD Dist. IV
3,924	3,233	120,261	108,773	.....Colorado
-	-	30,689	25,619	.....Idaho
2,282	5,645	124,454	148,363	.....Montana
35,803	31,214	146,479	163,863	.....Utah
19,342	28,207	133,423	175,203	.....Wyoming
61,351	68,299	555,306	621,821	.....Total
				PAD Dist. V
W	W	12,112	11,803	.....Alaska
W	W	85,500	101,653	.....Arizona
175,285	157,578	1,443,745	1,440,212	....California
-	-	7,999	7,427	.....Hawaii
W	W	48,179	39,865	.....Nevada
-	W	66,488	64,214	.....Oregon
-	-	238,006	284,634	....Washington
175,472	157,661	1,902,029	1,949,808	.....Total
4,808,034	4,599,422	35,204,820	33,964,226	.....U.S. Total

Table 3. Sales of Natural Gas Liquids and Liquefied Refinery Gases, by End Use, PAD District and State, 1988 and 1987 (Thousands of Gallons)

District & State	Residential & Commercial 1988	Residential & Commercial 1987	Internal Combustion Fuel 1988	Internal Combustion Fuel 1987	Chemical 1/ 1988	Chemical 1/ 1987	Industrial 2/ 1988	Industrial 2/ 1987
PAD Dist. I								
New England								
Connecticut	38,088	38,309	2,815	2,328	W	W	15,794	14,419
Maine	46,422	38,809	2,752	1,685	W	W	14,291	8,641
Massachusetts	68,522	65,539	5,709	5,570	W	W	11,336	12,117
New Hampshire	69,514	59,108	1,338	2,029	-	-	8,538	7,929
Rhode Island	13,528	14,644	1,909	906	-	-	5,020	5,916
Vermont	46,506	36,848	1,017	1,159	-	-	1,424	4,908
Central Atlantic								
Delaware	27,970	23,699	564	335	W	W	6,498	4,374
Maryland/D.C.	46,080	45,793	5,299	3,515	-	-	14,840	11,787
New Jersey	69,311	53,439	8,151	8,779	160,183	165,228	19,854	21,068
New York	190,754	184,829	11,295	9,452	W	W	15,136	15,619
Pennsylvania	121,085	108,235	16,348	16,538	W	W	72,474	142,885
Lower Atlantic								
Florida	249,832	264,245	20,226	21,247	W	W	32,431	22,750
Georgia	191,043	178,427	12,639	14,197	W	W	31,322	16,627
North Carolina	184,222	186,925	13,742	13,611	294	753	44,109	37,951
South Carolina	101,091	94,911	7,975	7,635	288	596	22,731	21,614
Virginia	91,587	90,136	9,089	8,937	W	335	31,350	26,319
West Virginia	17,188	13,018	2,064	1,564	19,066	20,658	3,203	986
Total	1,572,743	1,496,914	122,932	119,487	185,397	197,641	350,351	375,910
PAD Dist. II								
Illinois	239,237	228,463	47,691	42,436	1,328,370	1,211,148	42,031	40,067
Indiana	265,750	207,142	21,164	17,899	668	W	10,998	11,233
Iowa	241,114	175,782	6,520	6,534	W	W	10,449	5,518
Kansas	112,599	89,534	19,925	15,258	389,792	273,411	29,702	93,016
Kentucky	168,414	164,343	10,362	9,744	W	W	163,828	137,136
Michigan	509,809	432,612	48,964	46,572	W	34,098	64,110	60,692
Minnesota	223,216	180,417	10,541	9,852	W	W	28,534	15,284
Missouri	303,446	285,516	14,598	18,149	613	W	27,633	13,111
Nebraska	93,814	85,115	7,278	6,866	W	W	7,739	4,596
North Dakota	58,952	44,387	2,282	1,898	W	W	7,439	4,979
Ohio	312,747	282,756	49,465	48,083	W	W	153,189	254,701
Oklahoma	103,856	94,908	14,504	12,713	57,940	65,319	38,556	39,874
South Dakota	74,168	90,554	2,727	6,288	-	-	2,147	5,369
Tennessee	137,515	97,912	20,807	16,394	W	433	16,987	10,437
Wisconsin	273,753	236,341	19,214	17,186	W	W	18,575	13,952
Total	3,118,390	2,703,782	296,042	275,872	1,813,777	1,676,194	621,917	709,985
PAD Dist. III								
Alabama	154,765	147,622	10,847	12,430	W	W	12,843	11,828
Arkansas	104,765	99,920	8,898	9,337	W	W	4,526	3,596
Louisiana	53,735	52,707	9,770	11,278	1,623,794	1,714,360	302,921	188,800
Mississippi	116,079	104,466	16,161	19,582	W	W	18,188	11,919
New Mexico	50,370	52,970	8,711	8,903	W	W	4,728	2,473
Texas	346,372	366,965	55,624	55,942	10,612,232	9,626,360	215,147	328,849
Total	826,094	824,650	110,011	117,472	12,240,287	11,342,351	558,353	547,465
PAD Dist. IV								
Colorado	66,851	70,699	5,262	4,302	-	-	25,270	11,105
Idaho	15,521	12,064	3,964	3,845	-	-	7,113	5,824
Montana	34,054	34,081	4,725	4,222	W	W	9,705	8,563
Utah	30,454	31,365	6,331	6,410	W	W	9,177	7,338
Wyoming	42,275	63,837	5,008	5,493	W	W	21,241	12,685
Total	189,155	212,046	25,290	24,272	9,063	15,109	72,506	45,515
PAD Dist. V								
Alaska	8,792	8,715	896	864	-	-	W	W
Arizona	44,963	60,597	7,012	8,105	W	W	11,358	6,494
California	304,251	290,295	97,583	112,407	46,805	55,387	323,328	247,848
Hawaii	W	W	W	W	-	-	-	-
Nevada	32,677	28,961	2,358	2,367	W	W	7,854	7,016
Oregon	16,584	23,207	21,780	23,446	-	-	18,425	11,733
Washington	27,900	36,862	29,942	32,958	-	-	30,726	30,765
Total	442,201	455,247	160,503	180,910	46,882	55,457	393,422	305,198
U.S. Total	6,148,583	5,692,639	714,778	718,013	14,295,406	13,286,752	1,996,549	1,984,073

1/ The reported data strongly suggest that this category includes not only ethane, propane, butane and pentanes plus consumed as chemical feedstocks, but some refinery olefins and chemical plant fuel usage.
2/ Includes sales for refinery fuel use and synthetic rubber manufacture.
3/ Includes use as synthetic natural gas feedstock, and use in secondary recovery of petroleum.

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Gas Utility		Farm		Other 1/		Total		
1988	1987	1988	1987	1988	1987	1988	1987	District & State
								PAD Dist. I
								New England
W	W	2,501	2,348	2,519	3,190	64,580	61,194	...Connecticut
3,360	W	209	192	W	372	68,253	51,248	.....Maine
13,055	18,028	643	752	1,702	1,692	101,017	103,782	.Massachusetts
W	2,457	28	2,425	W	W	90,831	82,561	.New Hampshire
W	W	138	103	W	W	23,842	26,112	..Rhode Island
-	-	127	373	W	W	50,353	44,281	.....Vermont
								Central Atlantic
-	-	7,148	3,010	W	W	43,199	36,717	.....Delaware
-	W	6,153	3,857	607	3,906	72,979	69,569	.Maryland/D.C.
W	W	854	2,149	5,917	2,594	264,625	253,989	....New Jersey
W	W	6,753	7,246	1,784	3,028	226,665	221,601	.....New York
1,585	W	22,955	17,748	8,963	14,686	245,156	302,496	..Pennsylvania
								Lower Atlantic
W	17,236	19,451	17,068	6,295	8,574	345,293	355,202	.....Florida
W	267	51,761	45,450	5,102	3,747	292,854	259,812	.....Georgia
891	W	94,664	100,851	4,072	18,809	341,994	358,852	North Carolina
W	2,262	18,560	16,602	2,192	1,596	152,863	145,216	South Carolina
W	W	29,999	26,554	22,846	13,551	185,097	165,910	.....Virginia
W	W	2,927	2,461	W	W	44,516	38,761	.West Virginia
42,369	46,251	265,471	249,189	74,854	91,911	2,614,117	2,577,303	.....Total
								PAD Dist. II
124,705	25,958	107,408	123,367	8,547	15,690	1,897,989	1,687,129	.....Illinois
W	W	88,642	81,559	6,409	5,830	404,492	391,330	.....Indiana
	W	160,380	181,744	4,615	3,755	426,111	376,321	.....Iowa
W	W	53,645	46,734	280,374	218,909	928,520	734,878	.....Kansas
W	W	20,959	19,639	766	737	366,844	339,715	.....Kentucky
W	3,565	41,842	51,042	220,882	214,645	913,562	845,226	.....Michigan
W	W	78,333	99,503	2,862	3,668	343,903	316,882	.....Minnesota
W	W	61,166	42,706	2,896	1,896	410,553	362,991	.....Missouri
		116,320	102,779	156	59	225,595	199,644	.....Nebraska
W	W	22,453	30,593	719	6,583	92,935	88,660	..North Dakota
W	3,716	58,852	66,368	7,036	5,735	582,669	741,015	.....Ohio
W	W	36,025	37,292	5,986	3,975	256,870	254,970	.....Oklahoma
-	W	20,155	36,300	1,808	725	101,005	139,492	..South Dakota
W	W	8,081	17,946	3,858	2,867	187,734	148,545	.....Tennessee
W	W	57,933	46,633	8,854	7,151	374,400	321,385	.....Wisconsin
179,098	103,822	928,194	986,205	555,764	490,223	7,513,182	6,946,083	.....Total
								PAD Dist. III
658	W	22,951	26,415	1,728	1,320	204,227	199,828	.....Alabama
W	W	41,532	35,661	3,540	2,855	164,189	152,185	.....Arkansas
W	-	8,506	9,884	165,864	79,076	2,216,385	2,056,105	.....Louisiana
-	-	17,107	16,441	939	867	170,996	153,601	...Mississippi
-	-	2,586	2,912	841	1,057	67,693	67,827	....New Mexico
24,618	W	68,414	61,932	131,193	210,114	11,453,600	10,708,422	.....Texas
77,124	58,198	161,096	152,345	304,105	295,289	14,277,070	13,337,968	.....Total
								PAD Dist. IV
-	-	10,564	5,820	1,753	1,291	109,700	93,217	.....Colorado
-	-	2,624	2,787	1,467	847	30,689	25,367	.....Idaho
-	-	1,550	2,952	2,842	W	52,958	51,031	.....Montana
W	W	2,205	2,814	W	2,301	51,585	51,325	.....Utah
W	W	3,477	6,406	3,217	682	83,483	103,291	.....Wyoming
272	267	20,420	20,799	11,709	6,223	328,415	324,231	.....Total
								PAD Dist. V
-	-	W	W	W	W	11,930	11,799	.....Alaska
W	-	3,794	3,886	2,831	2,817	71,859	81,959	.....Arizona
35,214	30,083	38,203	34,916	36,517	22,335	881,901	793,271	....California
-	-	W	W	W	-	7,999	7,427	.....Hawaii
-	-	1,714	404	W	1,107	46,999	39,865	.....Nevada
-	-	5,913	5,044	3,786	775	66,488	64,205	.....Oregon
-	-	6,285	5,468	5,507	479	100,360	106,532	....Washington
37,083	30,083	55,995	50,264	51,450	27,899	1,187,536	1,105,058	.....Total
335,946	238,819	1,431,176	1,458,802	997,882	911,545	25,920,320	24,290,643	.....U.S. Total

Table 4. Sales of Propane, by Use, in the United States, by PAD District and State, 1988 and 1987 (Thousands of Gallons)

District & State	Residential & Commercial 1988	Residential & Commercial 1987	Internal Combustion Fuel 1988	Internal Combustion Fuel 1987	Chemical 1/ 1988	Chemical 1/ 1987	Industrial 2/ 1988	Industrial 2/ 1987
PAD Dist. I								
New England								
Connecticut	38,088	38,309	2,815	2,328	W	W	15,794	14,419
Maine	46,422	38,809	2,752	1,685	W	W	14,291	8,541
Massachusetts	68,522	65,539	5,709	5,570	-	-	11,336	12,117
New Hampshire	69,514	59,108	1,338	2,029	-	-	8,538	7,929
Rhode Island	13,528	14,644	1,909	906	-	-	5,020	5,916
Vermont	46,506	36,848	1,017	1,159	-	-	1,424	4,908
Central Atlantic								
Delaware	27,970	23,699	564	335	W	W	3,063	4,374
Maryland/D.C.	46,080	45,793	5,299	3,515	-	-	14,840	11,787
New Jersey	69,311	53,439	8,151	8,779	116,855	83,499	19,854	21,068
New York	190,754	184,829	11,295	9,452	W	W	15,136	15,619
Pennsylvania	121,085	108,235	16,348	16,538	W	W	71,566	47,451
Lower Atlantic								
Florida	249,794	264,214	20,226	21,247	-	W	32,431	22,750
Georgia	191,043	178,427	12,639	14,197	W	W	31,318	16,627
North Carolina	184,222	186,925	13,742	13,611	W	W	44,109	37,951
South Carolina	101,091	94,911	7,975	7,635	W	W	22,731	21,614
Virginia	91,587	90,136	9,089	8,937	-	W	30,731	26,319
West Virginia	17,188	13,018	2,064	1,564	W	W	3,203	986
Total	1,572,705	1,496,883	122,932	119,487	138,753	108,006	345,385	280,476
PAD Dist. II								
Illinois	235,237	228,463	47,691	42,436	138,942	254,780	26,805	33,006
Indiana	265,750	207,142	21,164	17,899	140	W	10,998	11,233
Iowa	241,114	175,782	6,520	6,534	-	-	10,449	5,518
Kansas	112,599	89,534	19,925	15,258	42,907	W	29,649	34,950
Kentucky	168,414	164,343	10,362	9,744	W	W	113,134	115,515
Michigan	509,809	432,612	48,964	46,572	W	W	64,110	60,692
Minnesota	223,216	188,417	10,541	9,852			28,534	15,284
Missouri	303,446	285,516	14,598	18,149	W	W	27,633	13,111
Nebraska	93,814	85,115	7,278	6,866	W	W	7,739	4,596
North Dakota	58,952	44,187	2,282	1,898	-	W	7,439	4,979
Ohio	312,747	282,756	49,465	48,083		W	147,409	49,103
Oklahoma	103,856	94,908	14,504	12,713	W	W	38,556	39,874
South Dakota	74,168	90,554	2,727	6,288	-	-	2,147	5,389
Tennessee	137,515	97,912	20,807	16,394	W	W	16,987	10,437
Wisconsin	273,753	236,341	19,214	17,186	-	-	18,575	13,952
Total	3,118,390	2,703,782	296,042	275,872	210,992	393,875	550,164	417,640
PAD Dist. III								
Alabama	154,741	147,596	10,847	12,430	W	W	12,496	11,828
Arkansas	104,765	99,920	8,898	9,337			4,526	3,596
Louisiana	51,735	52,707	9,770	11,278	341,547	368,989	71,993	16,214
Mississippi	115,921	104,075	16,161	19,582	-	-	18,188	11,003
New Mexico	50,378	52,970	8,711	8,903			4,728	2,473
Texas	346,138	366,352	55,624	55,942	3,477,164	3,968,272	50,354	104,932
Total	825,678	823,620	110,011	117,472	3,818,716	4,337,346	162,285	150,046
PAD Dist. IV								
Colorado	66,851	70,699	5,262	4,302			19,465	8,420
Idaho	15,512	12,064	3,964	3,845			7,113	5,824
Montana	34,054	34,081	4,725	4,222	W	W	9,705	8,563
Utah	23,726	23,632	5,985	6,012			8,946	7,020
Wyoming	36,899	57,659	4,733	5,178	W	W	20,979	12,415
Total	177,042	198,135	24,669	23,559	193	5,771	66,208	42,242
PAD Dist. V								
Alaska	8,792	8,715	896	864			W	W
Arizona	44,963	57,459	7,012	8,105			11,358	6,494
California	301,982	287,150	97,448	112,283	W	53,996	155,530	143,669
Hawaii	W	W	W	W	-	-	-	-
Nevada	32,677	28,961	2,353	2,367	-	-	7,854	7,016
Oregon	16,584	23,207	21,780	23,446	-	-	18,304	11,386
Washington	27,900	36,862	29,942	32,958	-	-	21,861	13,483
Total	439,932	448,964	160,363	180,786	45,661	53,906	216,638	183,390
U.S. Total	6,133,747	5,671,384	714,017	717,176	4,214,615	4,898,994	1,340,680	1,073,794

1/ The reported data strongly suggest that this category includes not only propane consumed as a chemical feedstock, but some refinery olefins and chemical plant fuel usage.
2/ Includes sales for refinery fuel use.

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Gas Utility		Farm		Other		Total		
1988	1987	1988	1987	1988	1987	1988	1987	District & State
								PAD Dist. I
								New England
W	W	2,501	2,348	1,946	2,497	64,007	60,501	...Connecticut
3,360	W	209	192	W	372	68,253	51,248	.....Maine
13,055	18,028	643	752	1,160	953	100,425	102,959	.Massachusetts
W	2,457	28	2,425	W	W	90,831	82,561	.New Hampshire
W	W	138	103	W	W	23,191	24,465	..Rhode Island
-	-	127	371	W	W	50,353	44,281	.....Vermont
								Central Atlantic
-	-	7,748	3,010	W	W	39,764	36,717	.....Delaware
-	W	6,153	3,857	500	3,715	72,872	69,378	.Maryland/D.C.
W	W	854	2,149	4,427	1,585	219,807	171,251	....New Jersey
W	W	6,753	7,246	1,756	2,968	226,584	221,505	.....New York
1,585	W	22,955	17,748	8,841	14,482	242,454	205,110	..Pennsylvania
								Lower Atlantic
W	17,236	19,451	17,068	6,295	8,574	344,908	351,098	.....Florida
W	267	51,761	45,450	3,327	2,659	290,461	257,922	.....Georgia
891	W	94,664	100,851	2,931	16,777	340,757	356,636	North Carolina
W	2,262	18,560	16,602	2,111	1,545	152,569	144,832	South Carolina
W	W	29,999	26,554	22,831	13,535	184,333	185,587	.....Virginia
W	W	2,927	2,461	W	W	44,375	38,622	.West Virginia
42,369	46,251	265,471	249,189	68,329	84,381	2,555,944	2,384,673	.....Total
								PAD Dist. II
22,706	W	107,408	123,367	4,884	5,062	587,673	688,646	.....Illinois
W	W	88,642	81,559	5,947	5,258	403,502	390,302	.....Indiana
W	W	160,380	181,744	4,577	3,731	423,040	373,554	.....Iowa
W	W	53,645	46,734	22,225	4,819	323,433	209,937	.....Kansas
W	3,565	20,959	19,639	766	737	314,803	317,630	.....Kentucky
W	W	41,842	53,042	80,332	105,429	772,611	735,740	.....Michigan
W	W	78,333	99,603	1,359	1,817	382,259	314,961	.....Minnesota
		61,166	42,706	2,226	1,332	409,478	361,960	.....Missouri
W	W	116,320	102,779	156	59	225,479	179,568	.....Nebraska
W	3,716	22,453	30,593	719	6,583	92,014	88,566	..North Dakota
W	W	58,852	66,368	6,637	5,196	575,162	533,951	.....Ohio
	W	36,025	37,292	1,763	478	194,734	186,166	.....Oklahoma
W	W	20,155	36,300	1,808	725	101,005	139,192	..South Dakota
W	W	8,081	17,946	2,689	1,539	186,294	144,979	.....Tennessee
	W	53,933	46,633	8,436	7,073	373,918	321,256	.....Wisconsin
77,099	79,196	928,194	986,205	144,524	149,838	5,325,405	5,006,608	.....Total
								PAD Dist. III
W	W	22,951	26,415	1,728	1,320	203,424	199,686	.....Alabama
W		41,522	35,644	3,809	2,751	163,173	151,370	.....Arkansas
W		8,506	9,884	6,289	4,557	543,635	463,629	.....Louisiana
-	-	17,107	16,441	927	851	168,304	151,952	...Mississippi
24,618	W	2,566	2,012	841	990	67,244	67,348	....New Mexico
		68,486	61,871	6,088	7,678	4,028,372	4,623,307	.....Texas
77,122	58,194	161,058	152,267	19,282	18,147	5,174,152	5,657,292	.....Total
								PAD Dist. IV
-	-	10,564	5,820	1,753	1,291	103,895	90,532	.....Colorado
-	-	2,624	2,787	1,467	841	30,680	25,367	.....Idaho
-	-	1,550	2,952	2,842	W	52,898	50,956	.....Montana
W	W	2,205	2,814	W	2,301	43,366	41,868	.....Utah
W	W	3,477	6,406	3,217	682	69,974	88,273	.....Wyoming
272	267	20,420	20,799	11,709	6,223	300,813	296,996	.....Total
								PAD Dist. V
-	-	W	W	W	W	11,930	11,799	.....Alaska
W	4,048	3,794	3,886	2,831	2,817	71,827	78,761	.....Arizona
-	-	38,090	34,365	22,560	21,839	662,903	657,351	....California
-	-	W	W	W	-	7,999	7,427	.....Hawaii
-	-	1,714	404	W	1,107	46,949	39,855	.....Nevada
-	-	5,913	5,034	3,786	775	66,367	63,848	.....Oregon
-	-	6,285	5,468	5,507	479	91,495	89,250	....Washington
3,501	4,048	55,882	49,704	37,493	27,403	959,470	948,291	.....Total
200,363	188,356	1,431,025	1,458,164	281,337	285,992	14,315,784	14,293,860	.....U.S. Total

Table 5. Sales of Butane, by Use, in the United States, by PAD District and State, 1988 and 1987 (Thousands of Gallons)

District & State	Residential & Commercial 1988	Residential & Commercial 1987	Internal Combustion Fuel 1988	Internal Combustion Fuel 1987	Chemical 1/ 1988	Chemical 1/ 1987	Industrial 2/ 1988	Industrial 2/ 1987
PAD Dist. I								
New England								
Connecticut	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-
Central Atlantic								
Delaware	-	-	-	-	-	-	W	-
Maryland/D.C.	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	W	W	-	-
New York	-	-	-	-	W	W	-	-
Pennsylvania	-	-	-	-	-	-	W	-
Lower Atlantic								
Florida	W	W	-	-	-	W	-	-
Georgia	-	-	-	-	-	-	W	-
North Carolina	-	-	-	-	W	W	-	-
South Carolina	-	-	-	-	W	W	-	-
Virginia	-	-	-	-	W	W	W	-
West Virginia	-	-	-	-	-	-	-	-
Total	38	31	-	-	42,123	81,218	4,966	-
PAD Dist. II								
Illinois	-	-	-	-	20,048	W	15,226	7,061
Indiana	-	-	-	-	W	W	-	-
Iowa	-	-	-	-	W	W	-	-
Kansas	-	-	-	-	36,137	W	-	-
Kentucky	-	-	-	-	-	-	W	W
Michigan	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	W	-	-
North Dakota	-	-	-	-	-	W	-	-
Ohio	-	-	-	-	-	-	W	-
Oklahoma	-	-	-	-	W	W	-	-
South Dakota	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-
Total	-	-	-	-	105,850	81,675	36,215	23,360
PAD Dist. III								
Alabama	W	28	-	-	W	W	-	-
Arkansas	-	-	-	-	W	W	-	-
Louisiana	-	-	-	-	180,261	367,058	230,928	W
Mississippi	158	141	-	-	W	-	-	W
New Mexico	-	-	-	-	W	W	-	-
Texas	258	613	-	-	1,506,569	871,067	14,526	W
Total	416	1,030	-	-	1,689,569	1,238,729	245,454	77,734
PAD Dist. IV								
Colorado	-	-	-	-	-	-	W	W
Idaho	W	-	-	-	-	-	-	-
Montana	-	-	-	-	W	W	-	-
Utah	W	W	W	W	W	W	W	W
Wyoming	W	W	W	W	W	W	-	W
Total	12,113	13,911	621	713	5,050	5,815	6,036	3,087
PAD Dist. V								
Alaska	-	-	-	-	-	-	-	-
Arizona	-	W	-	-	-	-	-	-
California	2,269	3,145	W	W	W	W	161,055	97,572
Hawaii	-	-	-	-	-	-	-	-
Nevada	-	-	W	-	-	-	-	-
Oregon	-	-	-	-	-	-	W	W
Washington	-	-	-	-	-	-	8,865	W
Total	2,269	6,283	140	124	258	1,060	170,041	115,201
U.S. Total	14,836	21,255	761	837	1,842,850	1,408,497	462,712	219,382

1/ The reported data strongly suggest that this category includes not only butane consumed as a chemical feedstock, but some refinery olefins and chemical plant fuel usage.
2/ Includes sales for refinery fuel use and synthetic rubber manufacture.
3/ Includes use in secondary recovery of petroleum.

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Gas Utility 1988	Gas Utility 1987	Farm 1988	Farm 1987	Other 3/ 1988	Other 3/ 1987	Total 1988	Total 1987	District & State
								PAD Dist. I
								New England
-	-	-	-	w	w	573	693	...Connecticut
-	-	-	-	-	-	-	-	.....Maine
-	-	-	-	w	w	539	732	.Massachusetts
-	-	-	-	-	-	-	-	.New Hampshire
-	-	-	-	w	w	651	1,647	..Rhode Island
-	-	-	-	-	-	-	-	.....Vermont
								Central Atlantic
-	-	-	-	-	-	3,435	-	.....Delaware
-	-	-	-	w	w	107	191	.Maryland/D.C.
-	-	-	-	w	w	4,241	81,320	....New Jersey
-	-	-	-	w	w	27	48	.....New York
-	-	-	-	w	w	1,030	204	..Pennsylvania
								Lower Atlantic
-	-	-	-	-	-	38	251	.....Florida
-	-	-	-	w	w	1,779	1,088	.....Georgia
-	-	-	-	w	w	1,214	1,960	North Carolina
-	-	-	-	-	-	165	276	South Carolina
-	-	-	-	w	w	764	284	.....Virginia
-	-	-	-	-	-	-	-	.west Virginia
-	-	-	-	6,436	7,457	53,563	88,706	.....Total
								PAD Dist. II
-	-	-	-	w	w	18,937	35,380	.....Illinois
-	-	-	-	w	w	463	575	.....Indiana
-	-	-	-	w	w	1,739	1,842	.....Iowa
-	-	-	-	w	w	116,872	111,539	.....Kansas
-	-	-	-	-	-	15,209	16,299	.....Kentucky
-	-	-	-	w	w	59,974	82,103	.....Michigan
-	-	-	-	w	w	1,503	1,849	.....Minnesota
-	-	-	-	w	w	670	564	.....Missouri
-	-	-	-	-	-	-	8	.....Nebraska
-	-	-	-	-	-	-	23	..North Dakota
-	-	-	-	w	w	6,179	539	.....Ohio
-	-	-	-	w	w	47,967	55,275	.....Oklahoma
-	-	-	-	-	-	-	-	..South Dakota
-	-	-	-	w	w	1,165	1,328	.....Tennessee
-	-	-	-	w	w	418	78	.....Wisconsin
-	-	-	-	149,031	202,367	291,096	307,402	.....Total
								PAD Dist. III
w	w	-	-	-	-	36	33	.....Alabama
-	-	w	w	w	w	496	435	.....Arkansas
-	-	-	-	w	w	415,148	384,926	.....Louisiana
-	-	-	-	w	w	2,206	1,323	...Mississippi
-	-	-	-	-	-	338	385	....New Mexico
-	-	28	w	w	w	1,521,818	933,139	.....Texas
2	2	38	78	4,563	2,568	1,940,042	1,320,141	.....Total
								PAD Dist. IV
-	-	-	-	-	-	5,805	2,685	.....Colorado
-	-	-	-	-	-	9	-	.....Idaho
-	-	-	-	-	-	5	17	.....Montana
-	-	-	-	-	-	7,937	9,175	.....Utah
-	-	-	-	-	-	10,064	11,649	.....Wyoming
-	-	-	-	-	-	23,820	23,526	.....Total
								PAD Dist. V
-	-	-	-	-	-	-	-	.....Alaska
-	-	-	-	-	-	-	3,138	.....Arizona
-	-	w	550	w	w	174,204	102,708	....California
-	-	-	-	-	-	-	-	.....Hawaii
-	-	-	-	-	-	5	-	.....Nevada
-	-	-	w	-	-	121	357	.....Oregon
-	-	-	-	-	-	8,865	17,282	....Washington
-	-	113	560	10,374	257	183,195	123,485	.....Total
2	2	151	638	170,404	212,649	2,491,716	1,863,260	.....U.S. Total

Table 6. Sales of Ethane by Use, in the United States, by PAD District, 1988 and 1987 (Thousands of Gallons)

District	Residential & Commercial 1988	Residential & Commercial 1987	Internal Combustion Fuel 1988	Internal Combustion Fuel 1987	Chemical 1988	Chemical 1987	Industrial 1/ 1988	Industrial 1/ 1987
PAD Dist. I	-	-	-	-	347	3,807	-	95,434
PAD Dist. II	-	-	-	-	1,448,223	1,165,602	35,538	268,985
PAD Dist. III	-	-	-	-	5,914,707	5,296,578	150,614	319,685
PAD Dist. IV	-	-	-	-	260	260	262	186
PAD Dist. V	-	-	-	-	-	-	6,743	6,607
U.S. Total	-	-	-	-	7,363,537	6,466,247	193,157	690,897

Table 7. Sales of Pentanes Plus by Use, in the United States, by PAD District, 1988 and 1987 (Thousands of Gallons)

District	Residential & Commercial 1988	Residential & Commercial 1987	Internal Combustion Fuel 1988	Internal Combustion Fuel 1987	Chemical 1988	Chemical 1987	Industrial 1/ 1988	Industrial 1/ 1987
PAD Dist. I	-	-	-	-	4,174	4,610	-	-
PAD Dist. II	-	-	-	-	48,712	35,042	-	-
PAD Dist. III	-	-	-	-	817,295	469,698	-	-
PAD Dist. IV	-	-	-	-	3,260	3,263	-	-
PAD Dist. V	-	-	-	-	963	401	-	-
U.S. Total	-	-	-	-	874,404	513,014	-	-

1/ The reported data strongly suggest that this category includes not only ethane, propane, butane and pentanes plus consumed as chemical feedstocks, but some refinery olefins and chemical plant fuel usage.
2/ Includes sales for refinery fuel use and synthetic rubber manufacture.

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

Gas Utility		Farm		Other 2/		Total		
1988	1987	1988	1987	1988	1987	1988	1987	District
-	-	-	-	-	-	347	99,241	PAD Dist. I
101,999	24,426	-	-	60,938	734	1,646,698	1,459,747	PAD Dist. II
-	-	-	-	277,649	272,953	6,342,970	5,889,216	PAD Dist. III
-	-	-	-	-	-	522	446	PAD Dist. IV
33,582	26,035	-	-	-	-	40,325	32,647	PAD Dist. V
135,581	50,461	-	-	338,587	273,687	8,030,862	7,481,292	.....U.S. Total

Gas Utility		Farm		Other 2/		Total		
1988	1987	1988	1987	1988	1987	1988	1987	District
				89	73	4,263	4,683	PAD Dist. I
				201,271	137,284	249,983	172,326	PAD Dist. II
				2,611	1,621	819,906	471,319	PAD Dist. III
						3,260	3,263	PAD Dist. IV
				3,583	239	4,540	640	PAD Dist. V
				207,554	139,217	1,081,958	652,231	.....U.S. Total

Table 8. Sales of Natural Gas Liquids and Liquefied Refinery Gases for Gasoline Blending by Product Type, PAD District and State, 1988 and 1987 (Thousands of Gallons)

District & State	Butane		Pentanes Plus		Total	
	1988	1987	1988	1987	1988	1987
PAD Dist. I						
New England						
Connecticut...	-	-	W	-	2,699	-
Maine.....	-	-	-	-	-	-
Massachusetts.	-	-	-	-	-	-
New Hampshire.	-	-	-	-	-	-
Rhode Island..	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	-
Central Atlantic						
Delaware.....	W	W	-	-	7,365	16,400
Maryland/D.C..	-	-	-	-	-	-
New Jersey....	26,173	93,632	-	W	26,173	94,405
New York.....	W	-	-	-	399	-
Pennsylvania..	119,412	W	-	W	119,412	184,623
Lower Atlantic						
Florida.....	-	-	W	W	15,685	24,804
Georgia.....	W	-	-	-	18	-
North Carolina	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-
Virginia.....	-	-	-	-	-	-
West Virginia.	-	-	-	-	-	-
Total.....	153,367	251,911	18,384	68,321	171,751	320,232
PAD Dist. II						
Illinois.....	469,170	444,180	W	59,288	499,550	503,468
Indiana.....	80,700	30,635	W	W	134,246	130,583
Iowa.....	-	-	-	-	-	-
Kansas.....	514,242	470,711	541,673	602,376	1,055,915	1,073,087
Kentucky.....	W	W	8,869	W	79,103	114,004
Michigan.....	97,589	71,082	-	W	97,589	71,171
Minnesota.....	W	W	-	-	16,231	12,624
Missouri.....	W	W	-	-	622	649
Nebraska.....	W	W	W	W	395	1,395
North Dakota..	28,821	35,286	W	25,545	34,271	60,831
Ohio.....	76,442	W	-	-	76,442	43,622
Oklahoma.....	124,257	130,495	31,986	40,497	156,243	170,992
South Dakota..	-	W	-	-	-	368
Tennessee.....	W	-	-	-	149	-
Wisconsin.....	-	-	-	-	-	-
Total.....	1,478,658	1,337,363	672,098	845,431	2,150,756	2,182,794
PAD Dist. III						
Alabama.....	W	W	1,151	W	8,983	8,891
Arkansas.....	W	W	-	W	1,947	2,374
Louisiana.....	1,350,903	1,370,559	705,660	614,835	2,056,563	1,985,394
Mississippi...	W	W	W	-	254,151	30,594
New Mexico....	17,366	2,293	41,058	59,192	58,424	61,485
Texas.....	1,775,704	1,803,076	1,864,837	2,136,403	3,640,541	3,939,479
Total.....	3,214,032	3,216,835	2,805,577	2,811,382	6,020,609	6,028,217
PAD Dist. IV						
Colorado.....	6,637	12,323	3,924	3,233	10,561	15,556
Idaho.....	-	W	-	-	-	252
Montana.....	W	91,745	W	W	71,496	97,332
Utah.....	59,373	81,606	35,521	30,932	94,894	112,538
Wyoming.....	33,521	46,628	16,419	25,284	49,940	71,912
Total.....	168,800	232,554	58,091	65,036	226,891	297,590
PAD Dist. V						
Alaska.....	W	-	W	W	182	-
Arizona.....	13,641	19,694	-	-	13,641	19,694
California....	391,028	489,933	170,816	157,008	561,844	646,941
Hawaii.....	-	-	-	-	-	-
Nevada.....	W	-	-	-	1,180	-
Oregon.....	-	-	-	W	-	9
Washington....	137,646	178,102	-	-	137,646	178,102
Total.....	543,567	687,729	170,926	157,021	714,493	844,750
U.S. Total.....	5,558,424	5,726,392	3,726,076	3,947,191	9,284,500	9,673,583

W Data withheld to avoid disclosure of individual company data.

Source: API, "Sales of Natural Gas Liquids and Liquefied Refinery Gases," Annual Survey.

PRODUCT DESCRIPTIONS AND DEFINITIONS

ETHANE—A normally gaseous paraffinic compound (C2H6). Include ethane sold in an ethane-propane mix. Note: Report ethane-ethylene mixtures for chemical use under Section A5. Subheading a. "Raw Materials and Solvents for Chemical Plants."

PROPANE—Include all products covered by the Gas Processors Association (GPA) specifications for commercial and HD-5 propane including propane sold in ethane-propane and butane-propane mixes. Also include propylene in this category.

BUTANE—Include all products covered by GPA specifications for commercial butane including butane sold in a butane-propane mix. Also include isobutane and butylene in this category.

PENTANES-PLUS—A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Include isopentane, natural gasoline and plant condensate. Exclude field condensate which is mixed with crude oil and reported as part of crude oil and field condensate production to DOE.

LIQUEFIED REFINERY GASES (LRG)

Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reporting categories are ethane/ethylene, propane/propylene, normal butane/butylene. Excludes still gas used for chemical or rubber manufacture which is reported as a petrochemical feedstock and also excludes liquefied petroleum gases intended for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstock or other uses.

STILL GAS (REFINERY GAS)

Any form of mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc. Still gas is reported to DOE for petrochemical feedstock use and/or refinery fuel use, but they should not be reported on this survey form if used in the gaseous state.

RESIDENTIAL AND COMMERCIAL USES—Include liquefied petroleum gases sold for use in private households and commercial establishments such as motels, restaurants, retail stores, laundries, etc., primarily for use in space heating, water heating and cooking. *LP gases used for space heating and cooking in farm houses should be reported under FARM USES.*

INTERNAL-COMBUSTION ENGINE FUEL—Include liquefied gases for use in highway vehicles, forklifts, oil-field drilling and production equipment, etc. *LP gases used for tractors and irrigation engines and other agricultural vehicles should be reported under FARM USES.*

INDUSTRIAL USES—Include liquefied petroleum gases sold to manufacturing plants for such uses as standby fuel, space heating, flame cutting, metallurgical furnaces etc. Include sales to petroleum refineries for fuel use. For internal use, include NGLs and LRGs consumed by your company as fuel. *Sales or internal use of NGLs and LRGs for gasoline blending should not be reported in this category. Such sales or internal use should be reported in Section B2.*

GAS DISTRIBUTION COMPANIES—Include sales of ethane and liquefied petroleum gases sold to gas utility companies for use as a standby fuel or direct distribution in gas mains.

RAW MATERIALS AND SOLVENTS FOR CHEMICAL PLANTS—Include natural gas liquids or liquified refinery gases sold or used internally as raw materials and solvents in the manufacture of chemicals. Also include volumes used in the production of synthetic rubber. *Sales to chemical plants for use as plant fuel should be reported in the "industrial use" category.*

FARM USES—Include liquefied petroleum gases sold for use in tractors, irrigation engines, *space heating of buildings (including farm houses)*, cooking, crop drying, tobacco curing, flame cultivation, poultry breeding, and other agricultural applications.

ALL OTHER USES—Include natural gas liquids, and liquefied refinery gas sold or used for any purpose not covered in the above categories, including secondary recovery use. Include NGLs and LRGs for use as SNG feedstock. Sales to SNG plants for use as plant fuel should be reported in the "industrial use" category.

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